

Title (en)

Tool exchanger for machine-tools.

Title (de)

Werkzeugwechsler für programmgesteuerte Werkzeugmaschinen.

Title (fr)

Changeur d'outils pour machines-outils.

Publication

EP 0396913 B1 19931027 (DE)

Application

EP 90106653 A 19900406

Priority

DE 8905795 U 19890509

Abstract (en)

[origin: EP0396913A1] The subject matter of the invention is a tool exchanger for program-controlled machine tools, with a device for transporting selected tools between a tool magazine and a work spindle of the machine tool and with two tool grippers which are displaced by a predetermined swivel angle, are arranged in a supporting holder mounted on the transport device and can be rotated between an exchange position and at least one stand-by position. In order to permit quicker exchange operations of the tools in a horizontal and a vertical work spindle, the drive means for opening and closing both tool grippers (4, 5) are actuated simultaneously. The supporting holder (3) has a locking mechanism which locks the tool gripper located in the respective stand-by position in its closed state. <IMAGE>

IPC 1-7

B23Q 3/155; **B23Q 3/157**

IPC 8 full level

B23Q 3/157 (2006.01); **B23Q 3/155** (2006.01)

CPC (source: EP US)

B23Q 3/1554 (2013.01 - EP US); **B23Q 2003/155418** (2016.10 - EP US); **B23Q 2003/155428** (2016.10 - EP US); **Y10T 483/165** (2015.01 - EP US)

Cited by

US5437592A; DE4331064A1; US5496249A

Designated contracting state (EPC)

CH DE ES FR GB IT LI

DOCDB simple family (publication)

DE 8905795 U1 19890720; DE 59003192 D1 19931202; EP 0396913 A1 19901114; EP 0396913 B1 19931027; ES 2047741 T3 19940301; JP H02303745 A 19901217; US 5142766 A 19920901

DOCDB simple family (application)

DE 8905795 U 19890509; DE 59003192 T 19900406; EP 90106653 A 19900406; ES 90106653 T 19900406; JP 11703690 A 19900508; US 52132990 A 19900509